



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-6541; Directorate Identifier 2015-NM-135-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to adopt a new airworthiness directive (AD) for all The Boeing Company Model 737-600, -700, -700C, -800, -900, and -900ER series airplanes. This proposed AD was prompted by reports of a manufacturing oversight, in which a supplier omitted the required protective finish on certain bushings installed in the rear spar upper chord on horizontal stabilizers, which could lead to galvanic corrosion and consequent cracking of the rear spar upper chord. This proposed AD would require an inspection or records check to determine if affected horizontal stabilizers are installed, related investigative actions, and for affected horizontal stabilizers, repetitive inspections for any crack of the horizontal stabilizer rear spar upper chord, and corrective action if necessary. We are proposing this AD to detect and correct cracking of the rear spar upper chord, which can result in the failure of the upper chord and consequent departure of the horizontal stabilizer from the airplane, which can lead to loss of continued safe flight and landing.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone: 206-544-5000, extension 1; fax: 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-6541.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-6541; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Jason Deutschman, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office

(ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6595; fax: 425-917-6590; email: jason.deutschman@faa.gov.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2015-6541; Directorate Identifier 2015-NM-135-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

We received reports of a manufacturing oversight, in which the required protective finish (zinc-nickel alloy plate or cadmium plate) was omitted on the 182A1508-4/-5/-6 bushings (in line with the terminal fitting holes) installed in the rear spar upper chord on horizontal stabilizers with certain serial numbers. This issue was discovered after production of the affected stabilizers.

The 182A1508-4/-5/-6 bushings are made from aluminum-nickel-bronze. Installing these bushings, without the required protective finish, into the 2024-T3511 aluminum horizontal stabilizer rear spar upper chord can lead to galvanic corrosion between the dissimilar metals. Bushings with galvanic corrosion, if not corrected, can lead to cracking of the rear spar upper chord, which can result in the failure of the upper

chord and consequent departure of the horizontal stabilizer from the airplane, which can lead to loss of continued safe flight and landing.

### **Related Service Information under 1 CFR part 51**

We reviewed Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015. The service information describes procedures for an inspection or records review to determine if affected horizontal stabilizers are installed, related investigative actions, high frequency eddy current inspections for any crack of the horizontal stabilizer rear spar upper chord, and corrective action if necessary. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section of this NPRM.

### **FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

### **Proposed AD Requirements**

This proposed AD would require accomplishing the actions specified in the service information described previously, except as discussed under “Differences Between this Proposed AD and the Service Information.”

The phrase “related investigative actions” is used in this proposed AD. “Related investigative actions” are follow-on actions that (1) are related to the primary action, and (2) further investigate the nature of any condition found. Related investigative actions in an AD could include, for example, inspections.

The phrase “corrective actions” is used in this proposed AD. “Corrective actions” are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

### **Differences Between this Proposed AD and the Service Information**

Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

### **Explanation of “RC” Steps in Service Information**

The FAA worked in conjunction with industry, under the Airworthiness Directive Implementation Aviation Rulemaking Committee (ARC), to enhance the AD system. One enhancement was a new process for annotating which steps in the service information are required for compliance with an AD. Differentiating these steps from other tasks in the service information is expected to improve an owner’s/operator’s understanding of crucial AD requirements and help provide consistent judgment in AD compliance. The steps identified as Required for Compliance (RC) in any service information identified previously have a direct effect on detecting, preventing, resolving, or eliminating an identified unsafe condition.

For service information that contains steps that are labeled as RC, the following provisions apply: (1) the steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD, and an AMOC is required for any deviations to RC steps, including substeps and identified figures; and (2) steps not labeled as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

## Costs of Compliance

We estimate that this proposed AD affects 1,397 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection or check	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$118,745

We estimate the following costs to do any necessary inspections that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need these inspections:

### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Inspections	4 work-hours X \$85 per hour = \$340	\$0	\$340

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

We have received no definitive data that would enable us to provide cost estimates for the on-condition repairs specified in this proposed AD.

## Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: “General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by adding the following new airworthiness directive (AD):

**The Boeing Company:** Docket No. FAA-2015-6541; Directorate Identifier 2015-NM-135-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

None.

#### **(c) Applicability**

This AD applies to all The Boeing Company Model 737-600, -700, -700C, -800, -900, and 900ER series airplanes, certificated in any category.

#### **(d) Subject**

Air Transport Association (ATA) of America Code 55, Stabilizers.

#### **(e) Unsafe Condition**

This AD was prompted by reports of a manufacturing oversight, in which a supplier omitted the required protective finish on certain bushings installed in the rear spar upper chord on horizontal stabilizers, which could lead to galvanic corrosion and consequent cracking of the rear spar upper chord. We are issuing this AD to detect and correct cracking of the rear spar upper chord, which can result in the failure of the upper chord and consequent departure of the horizontal stabilizer from the airplane, which can lead to loss of continued safe flight and landing.



**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Serial Number Check or Inspection to Determine if Certain Horizontal Stabilizers are Installed, Related Investigative Actions, Repetitive Inspections for Cracks, and Corrective Action**

(1) Except as specified in paragraph (h)(1) of this AD, within the compliance time identified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015, do the actions specified in paragraph (g)(1)(i) or (g)(1)(ii) of this AD.

(i) Do a records check to determine if an affected horizontal stabilizer is installed and if any horizontal stabilizer has been exchanged, and do all applicable related investigative actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015. Affected horizontal stabilizers are identified in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015.

(ii) Do an inspection of the horizontal stabilizer identification plate to determine if any affected horizontal stabilizer is installed, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015. Affected horizontal stabilizers are identified in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015.

(2) If, during any action required by paragraph (g)(1)(i) or (g)(1)(ii) of this AD, any affected horizontal stabilizer is found: Except as specified in paragraph (h)(1) of this AD, within the compliance time identified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015, do a high frequency eddy current (HFEC) inspection for any crack of the horizontal stabilizer rear spar upper chord and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015, except as

required by paragraph (h)(2) of this AD. Repeat the inspection thereafter at intervals identified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015.

**(h) Exceptions to the Service Information Specifications**

(1) Where Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015, specifies a compliance time “after the original issue date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) If any cracking is found during any inspection required by this AD, and Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015, specifies to contact Boeing for appropriate action: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

**(i) Parts Installation Prohibition**

As of the effective date of this AD, no person may install a horizontal stabilizer on any airplane, except as specified in paragraphs (i)(1) and (i)(2) of this AD.

(1) A horizontal stabilizer may be installed if the part is inspected in accordance with “Part 2: Horizontal Stabilizer Identification Plate Inspection” of the Accomplishments Instructions of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015, and no affected serial number is found.

(2) A horizontal stabilizer may be installed if the part is inspected in accordance with “Part 2: Horizontal Stabilizer Identification Plate Inspection” of the Accomplishments Instructions of Boeing Alert Service Bulletin 737-55A1097, dated July 1, 2015, and an affected serial number is found, provided the actions specified in paragraphs (i)(2)(i) and (i)(2)(ii) of this AD are done, as applicable.

(i) An initial HFEC inspection specified in paragraph (g)(2) of this AD is done before further flight and thereafter repetitive HFEC inspections specified in paragraph

(g)(2) of this AD are done within the compliance times specified in paragraph (g)(2) of this AD.

(ii) All applicable corrective actions are done before further flight as required by paragraph (h)(2) of this AD.

**(j) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(4)(i) and (j)(4)(ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator's maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

**(k) Related Information**

(1) For more information about this AD, contact Jason Deutschman, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle ACO, 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6595; fax: 425-917-6590; email: [jason.deutschman@faa.gov](mailto:jason.deutschman@faa.gov).

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone: 206-544-5000, extension 1; fax: 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on November 20, 2015.

**Jeffrey E. Duven,**  
*Manager,*  
*Transport Airplane Directorate,*  
*Aircraft Certification Service.*

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